USERS GUIDE

# ASP-12H-4K

## HDMI 4K2K 1x2 Splitter with EDID Management

Manual Number: 141110

# SAFETY INSTRUCTIONS

Please review the following safety precautions. If this is the first time using this model, then read this manual before installing or using the product. If the product is not functioning properly, please contact your local dealer or Aurora for further instructions.

The lightning symbol in the triangle is used to alert you to the presence of dangerous voltage inside the product that may be sufficient to constitute a risk of electric shock to anyone opening the case. It is also used to indicate improper installation or handling of the product that could damage the electrical system in the product or in other equipment attached to the product.

The exclamation point in the triangle is used to alert you to important operating and maintenance instructions. Failure to follow these instructions could result in injury to you or damage to the product.

Be careful with electricity:

- **Power outlet**: To prevent electric shock, be sure the electrical plug used on the product power cord matches the electrical outlet used to supply power to the Aurora product. Use only the power adapter and power connection cables designed for this unit.
- **Power cord**: Be sure the power cord is routed so that it will not be stepped on or pinched by heavy items.
- **Lightning**: For protection from lightning or when the product is left unattended for a long period, disconnect it from the power source.

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Also follow these precautions:

- **Ventilation**: Do not block the ventilation slots if applicable on the product or place any heavy object on top of it.
  Blocking the air flow could cause damage. Arrange components so that air can flow freely. Ensure that there is adequate ventilation if the product is placed in a stand or cabinet. Put the product in a properly ventilated area, away from direct sunlight or any source of heat.
- **Overheating**: Avoid stacking the Aurora product on top of a hot component such as a power amplifier.
- **Risk of Fire**: Do not place unit on top of any easily combustible material, such as carpet or fabric.
- **Proper Connections**: Be sure all cables and equipment are connected to the unit as described in this manual.
- **Object Entry**: To avoid electric shock, never stick anything in the slots on the case or remove the cover.
- **Water Exposure**: To reduce the risk of fire or electric shock, do not expose to rain or moisture.
- **Cleaning**: Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- **ESD**: Handle this unit with proper ESD care. Failure to do so can result in failure.

**FCC**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.
(2) This device must accept any interferences received, including interference that may cause undesired operation.

**Trademarks**

*All trademarks in this document are the properties of their respective owners.*

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# PACKAGE CONTENTS

Please make sure the following items are included within your package. Contact your dealer if any items are missing or damaged.

- ASP-12H-4K x 1
- 5V 2A DC Power Wall Adapter x 1
- User Manual x 1

Note: Go to www.auroramultimedia.com for latest manual and firmware

# INTRODUCTION

## About

The ASP-12H-4K 1x2 HDMI 4K2K Splitter with EDID Management provides one of the most advanced HDMI splitter solutions by which the Ultra High Definition video and high quality audio can be transmitted to multiple locations without losing quality. The ASP-12H-4K supports all 3D formats and true 4K2K video.

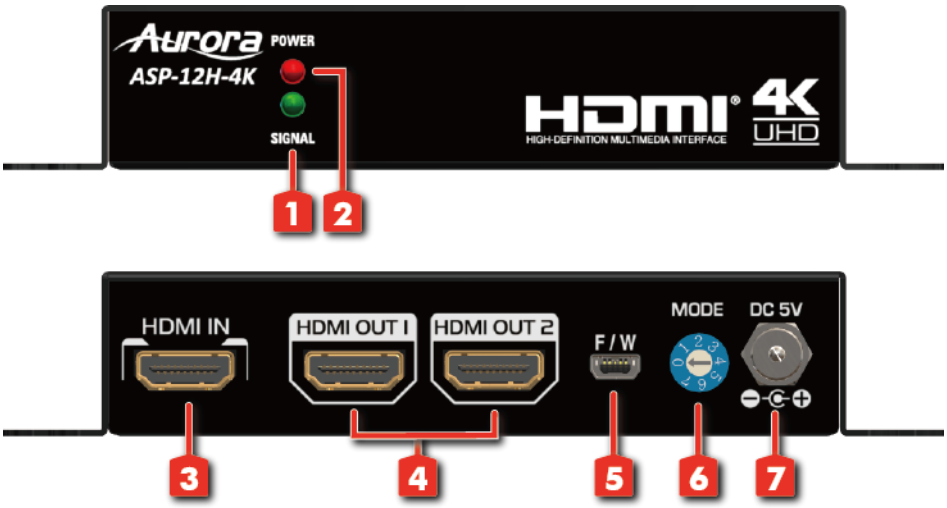
The ASP-12H-4K firmware upgrade capability via the USB port ensures compatibility now and in the future. With 48 bit deep color video and high definition audio support the ASP-12H-4K is suitable for high quality HDMI broadcasting, conference room, digital signage and education applications.

## Features

- Supports HDMI Deep Color & 3D / DVI 1.0 compliant
- HDCP 1.3 compliant
- Wide frequency range: 25MHz~340MHz
- Video bandwidth: 10.2Gbps
- Resolution up to 4K2K @ 30Hz
- Supports default EDID and has ability to learn the EDID of displays
- Supports xvYCC, x.v.Color & Deep Color
- Mini-USB port for firmware updating
- Supports Dolby Digital, DTS-HD and Dolby TrueHD audio
- Connectors on same side for easy installation

** Refer to Technical Specifications Section.*

## Front & Rear Panel ASP-12H-4K



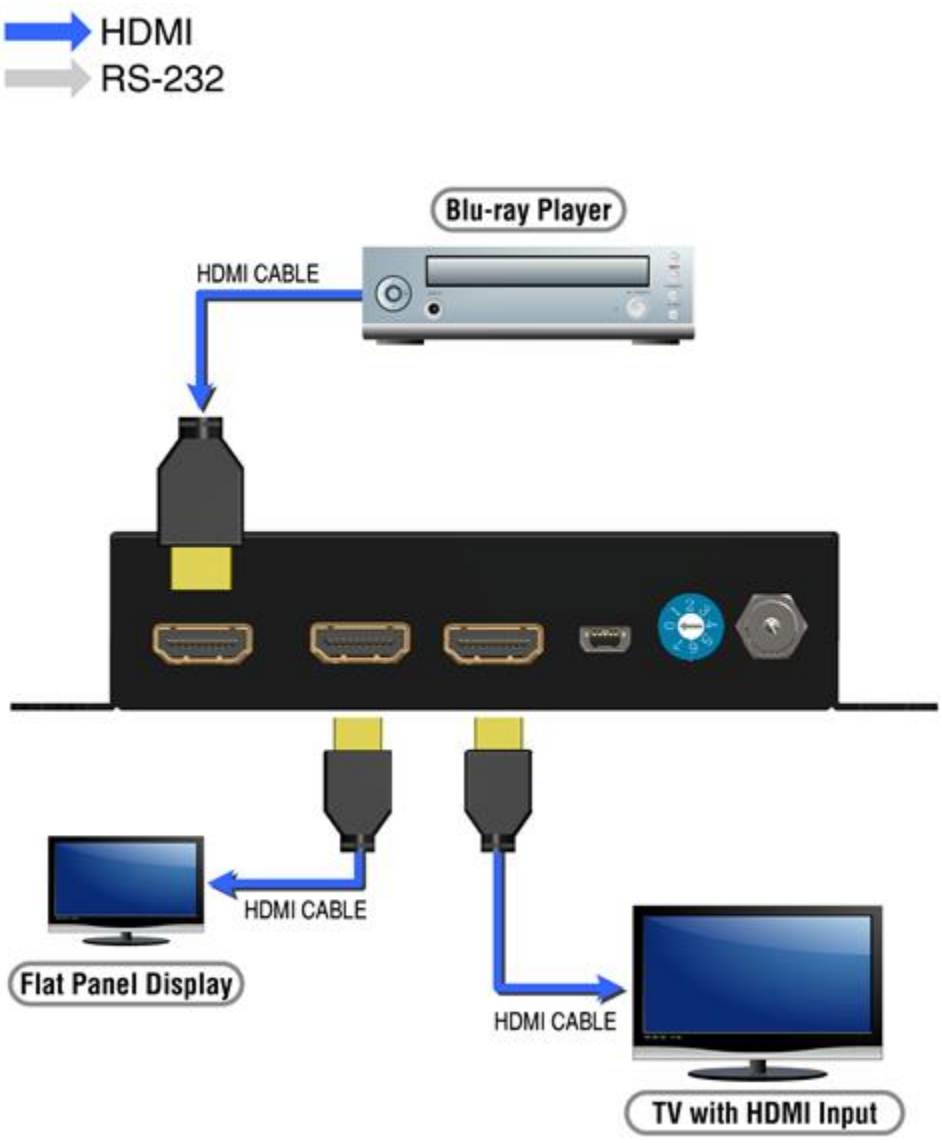

1. **Signal LED:** Signal LED indicator
2. **Power LED:** Lights on when device is ready
3. **HDMI IN:** Connect to a HDMI input source
4. **HDMI OUT1-2:** HDMI outputs to HDMI displays
   [HDMI OUT1: EDID Learn Default]
5. **Mini-USB:** For technical support only [firmware update]
6. **MODE:**
   0 - F/W update mode
   1 - EDID Full-HD (1080p@60) - 24bit 2D video & 7.1ch audio
   2 - EDID Full-HD (1080p@60) - 24bit 2D video & 2ch audio
   3 - EDID Ultra-HD (4K2K@30) - 24bit 2D video & 7.1ch audio
   4 - EDID Ultra-HD (4K2K@30) - 24bit 2D video & 2ch audio
   5 - EDID HD (1080p@30) (1080i@60)(720p@60) - 24bit 2D video & 2ch audio
   6 - Auto EDID analysis learning mode
   7 - EDID learning mode
7. **+5V DC:** Connect to the +5V DC 2A power supply unit

***Note:*** *Automatic EDID learning will detect all the connected HDMI equipped monitors and analyze all the content of EDID. The EDID with lowest resolution support will be the reference EDID for incoming HDMI source players.*

*If connecting a new monitor to the splitter under mode 6 (auto EDID) & mode 7 (EDID*

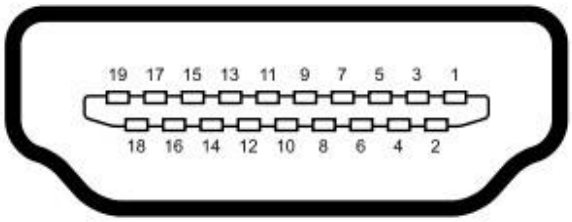
*learning), experiencing a short period of time without display should be expected. The splitter will do Automatic EDID learning which analyzes the newly connected monitor to see if the EDID for the HDMI input is necessary to update.*

## Connection Diagram



# CONNECTOR PIN DEFINITION

## HDMI




Type A (Receptacle) HDMI

| | | | | | |
|---|---|---|---|---|---|
| Pin 1 | TMDS Data2+ | Pin 8 | TMDS Data0 Shield | Pin 15 | SCL |
| Pin 2 | TMDS Data2 Shield | Pin 9 | TMDS Data0– | Pin 16 | SDA |
| Pin 3 | TMDS Data2– | Pin 10 | TMDS Clock+ | Pin 17 | DDC/CEC Ground |
| Pin 4 | TMDS Data1+ | Pin 11 | TMDS Clock Shield | Pin 18 | +5 V Power |
| Pin 5 | TMDS Data1 Shield | Pin 12 | TMDS Clock– | Pin 19 | Hot Plug Detect |
| Pin 6 | TMDS Data1– | Pin 13 | CEC | | |
| Pin 7 | TMDS Data0+ | Pin 14 | Reserved (N.C. on device) | | |

# APPENDIX 1 Troubleshooting

| Problem | Solution |
|---|---|
| 1. No Video Signal. | a. Check that the power plug is properly inserted into a functioning power outlet.<br>b. Make certain source is on.<br>c. Make certain destination is on<br>d. Check EDID setup |
| 2. LED is not lit | a. Check 5v power supply is plugged in.<br>b. Check to see if Wall supply is plugged into wall outlet.<br>c. Make certain wall outlet has power. |
| 3. EDID did not take | a. Recycle power to source device or unplug and reinstall cable for source device to retrieve latest EDID |

# APPENDIX 2 Technical Specifications

| Model Name | | ASP-12H-4K |
|---|---|---|
| **Technical** | | |
| HDMI/DVI compliance | | HDMI Deep Color, full 3D & 4K2K/ DVI 1.0 |
| HDCP compliance | | HDCP 1.3 |
| Video bandwidth | | Single-link 340MHz [10.2Gbps] |
| Video support | | Up to 4K2K @30 |
| HDMI Output Distance | | 720p 12bit up to 20m, 1080i 12bit up to 20m, 1080p 12bit up to 15m, 4K up to 7.5m (Note: Cable quality may impact distance) |
| Audio support | | DTS-HD Master Audio, Dolby TrueHD Dolby Digital, DTS, DVD-Audio, LPCM, SACD, MPCM |
| ESD protection | | [1] Human body model — ±19kV [air-gap discharge] & ±12kV [contact discharge]<br>[2] Core chipset — ±2kV |
| Firmware update | | Mini-USB port |
| Input | | 1x HDMI [7.1ch audio & video] |
| Output | | 2x HDMI [7.1ch audio & video] |
| HDMI connector | | Type A [19-pin female] |
| Rotary control switch | | EDID Mode selection |
| **Mechanical** | | |
| Housing | | Metal enclosure |
| Dimensions [L x W x H] | Model | 113 x 62.5 x 25mm [4.45" x 2.46" x .984"] |
| | Package | 198 x 137x 74mm [7.8" x 5.39" x 2.91"] |
| Weight | Model | 463g [16.3 oz] |
| | Package | 946g [1.0 lbs] |
| Mounting | | Integrated ears |
| Power supply | | 5V 2A DC |
| Power consumption | | 10 Watts [max] |
| Operation temperature | | 0~40°C [32~104°F] |
| Storage temperature | | -20~60°C [-4~140°F] |
| Relative humidity | | 20~90% RH [no condensation] |

***Specifications subject to change without notice.***

# APPENDIX 4 Warranty

## Limited 3 Year Warranty

Aurora Multimedia Corp. (“Manufacturer”) warrants that this product is free of defects in both materials and workmanship for a period of 3 years as defined herein for parts and labor from date of purchase. This Limited Warranty covers products purchased in the year of 2009 and after. Motorized mechanical parts (Hard Drives, DVD, etc), mechanical parts (buttons, doors, etc), remotes and cables are covered for a period of 1 year. Touch screen displays are covered for 1 year; touch screen overlay components are covered for 90 days. Supplied batteries are not covered by this warranty. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with same or similar model) at our option without charge for parts or labor for the specified product lifetime warranty period.

This warranty shall not apply if any of the following:

A. The product has been damaged by negligence, accident, lightning, water, act-of-God or mishandling; or,

B. The product has not been operated in accordance with procedures specified in operating instructions: or,

C. The product has been repaired and or altered by other than manufacturer or authorized service center; or,

D. The product's original serial number has been modified or removed: or,

E. External equipment other than supplied by manufacturer, in determination of manufacturer, shall have affected the performance, safety or reliability of the product.

F. Part(s) are no longer available for product.

In the event that the product needs repair or replacement during the specified warranty period, product should be shipped back to Manufacturer at Purchaser's expense. Repaired or replaced product shall be returned to Purchaser by standard shipping methods at Manufacturer's discretion. Express shipping will be at the expense of the Purchaser. If Purchaser resides outside the contiguous US, return shipping shall be at Purchaser's expense.

**No other warranty, express or implied other than Manufacturer's shall apply.**

Manufacturer does not assume any responsibility for consequential damages, expenses or loss of revenue or property, inconvenience or interruption in operation experienced by the customer due to a malfunction of the purchased equipment. No warranty service performed on any product shall extend the applicable warranty period. This warranty does not cover damage to the equipment during shipping and Manufacturer assumes no responsibility for such damage.

**Aurora Multimedia Corp.**

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